



Director of
Central
Intelligence

~~Secret~~

25X1

Brazil and High Technology: A Source for the Soviet Bloc

25X1

Technology Transfer
Intelligence Committee

25X1

~~Secret~~

TTIC 87-10004
June 1987

Copy 515

Page Denied

**Director of
Central
Intelligence**

~~Secret~~

25X1

Brazil and High Technology: A Source for the Soviet Bloc

25X1

~~Secret~~

*TTIC 87-10004
June 1987*

Secret

25X1

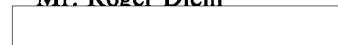
Note to Readers

The Technology Transfer Intelligence Committee (TTIC) is the DCI Committee whose mission is to serve as the focal point within the Intelligence Community on all technology transfer issues. The Committee coordinates Community activities and is the principal source of intelligence support for those US Government entities charged with the responsibility for policy and action on technology transfer issues. It works with other Intelligence Community committees and appropriate agencies to ensure that intelligence information collected on technology transfer is consistent with the DCI's priorities and guidance and meets the needs of Community production organizations.

The TTIC Chairman and members are:



Mr. Vincent DeCain
 Mr. David Whitman
 Dr. Robert Bingham
 Mr. A. R. Cinquegrana
 Mr. Rodney Huff
 Maj. Mario Avalos
 Lt. Col. J. Rob Robinson
 Mr. Russ Vaughn
 Mr. Arthur Long
 Mr. William Meglen
 Mr. Roger Diehl



Ms. Kristine Langdon
 Lt. Col. Robert Davie



Central Intelligence Agency
 Central Intelligence Agency
 Defense Intelligence Agency
 Department of Commerce
 Department of Defense
 Department of Energy
 Department of Justice
 Department of State
 Department of the Air Force
 Department of the Army
 Department of the Navy
 Department of the Treasury
 US Customs Service
 Federal Bureau of Investigation
 National Security Agency
 National Security Council
 Office of the Secretary of the
 Air Force
 Technology Transfer Intelligence
 Committee

25X1

25X1

25X1

25X1

Secret

Secret

25X1

Preface

This report assesses the role of Brazil as a target for Soviet Bloc acquisition of controlled commodities and technology. It examines several indigenous high-technology industries, including telecommunications, computers, strategic minerals, robotics, and weapons, that the USSR and its allies could acquire. The report also discusses Brazil's firm stance on economic sovereignty and its effect upon Brazil's attitude toward export control practices and technology transfer safeguards.

The report was prepared for the State-chaired Senior Interagency Group on the Transfer of Strategic Technology. Information as of 24 April 1987 was used in preparing this report. Members of the Working Group were:

[Redacted]
Mr. Richard Bray

Central Intelligence Agency 25X1
Air Force/Foreign Technology Division

Defense Intelligence Agency 25X1
Defense Intelligence Agency

Central Intelligence Agency
Central Intelligence Agency/TTIC

National Security Agency

Department of Commerce

Central Intelligence Agency 25X1

Department of Commerce

United States Customs Service

Central Intelligence Agency 25X1

Ms. Lisa Hilliard

Ms. Margaret Shields

Ms. Paula Todrin

Secret

25X1

**Brazil and High Technology:
A Source for the Soviet Bloc**

25X1

**Summary
and Conclusions**

Brazil currently is a potential source of certain militarily critical technologies for the Soviet Bloc. In the past two decades, Brazil has registered remarkable economic growth and achieved impressive gains in scientific and technological development. We believe, however, that Brazil continues to upgrade its indigenous capabilities and improves its access to Western high technology, it will present an even more attractive target for Soviet Bloc acquisition efforts.

25X1

Impressive advances have been made in areas where Brazil has devoted adequate resources. We believe that the telecommunications sector, where Brazilian scientists collaborate closely with Western researchers, will provide the USSR with the best opportunities for acquiring high-technology equipment and data. Brazilian capabilities in niobium production and processing—a metal vital to the development of superconductors—is also an area the USSR can exploit.

25X1

Brazil's information technology industry is a less attractive target for the Soviet Bloc; its low quality and high cost in relation to other sources in the world market make sizable exports to the USSR unlikely. Brazilian computer companies' lack of capital, management expertise, and research infrastructure, coupled with highly protectionist policies, militate against the development of an innovative informatics industry. We believe, however, the ties that some Brazilian computer companies have to Western firms make small-scale diversions of COCOM-controlled¹ equipment possible.

25X1

Because of its growing capability, emphasis on upgrading the arms industry, and a commitment to expanding a scientific manpower base, Brazil could be a viable source of additional sensitive technologies in the coming years. Computer-assisted design systems now under development and advanced semiconductor research may be future Soviet targets. At present, the capabilities of Brazil's arms industry are too low to attract Soviet attention, but Brasilia's determination to incorporate Western technology into arms for export will present a threat to COCOM efforts to safeguard sophisticated technology. Finally, the growing number of Brazilians studying scientific and technical subjects at Western universities presents a potential source of technical data transfer.

25X1

¹ Members of the Coordinating Committee on Multilateral Export Controls (COCOM) include Japan and all NATO countries except Iceland.

25X1

Secret

TTIC 87-10004
June 1987

Secret

25X1

To date, we know of only one possible diversion of high technology from Brazil to the Soviet Bloc. Over the last year, Soviet efforts to increase the still embryonic scientific and technological cooperation have gained momentum; the Soviets have been pushing aggressively for commercial deals in informatics and telecommunications. Brazilian decisionmakers have been unwilling to conduct significant exchanges in these two technologies, but they have agreed to a commercial contract for the sale of optical fiber.

25X1

We believe the Soviet Bloc probably will continue to improve its access to advanced indigenous and Western technology in Brazil; the transition to civilian rule has brought a thaw in Brazilian-Bloc relations. While

25X1

political atmosphere and budgetary cuts. In addition to outright purchases and scientific exchanges, we believe the Soviets can use other acquisition channels, including tapping into the large black market in high-technology goods that exists in Brazil.

25X1

In our judgment, US efforts to reach an accord on technology transfer safeguards will continue to meet Brazilian resistance. Resurgent nationalism and economic exigencies will cause Brasilia to strongly resist any pressure from Washington to curb its exports. The stalemated negotiations over end use assurances on the purchase of a US supercomputer well illustrate Brasilia's reluctance to retreat from its position that technology transfer restrictions should be decided on a case-by-case, rather than generic, basis. The politically embattled President Sarney will remain vulnerable to a nationalistic backlash that could result if he agreed to accept more wide-ranging technology transfer safeguards sought by the United States and COCOM. Finally, if tensions between Brasilia and Washington over trade issues or the foreign debt intensify, President Sarney will come under considerable pressure from within and outside his administration to take a hardline approach toward a technology transfer agreement.

25X1

Over the longer term, however, we believe that Brazil may become more accommodating of the US position on protecting high technology. Resistance to an agreement will erode if bilateral tensions are reduced. To a large extent, however, Brasilia's stance will be determined by its reaction to any potential cutoff of high technology from the United States and its availability elsewhere; we believe Brasilia is counting on its strengthened ties to Western Europe and Japan for access to advanced technology that would be free from US restrictions. Even if Brasilia enters into serious negotiations with the United States, it could well find a way to restrict provisions of an agreement.

25X1

Secret

Secret

25X1

Nevertheless, Brazil probably will not grant the extent of protection that the United States requires and over time may skirt the restrictions. At best, Brasilia will look upon controls as a burdensome, but necessary, expense of obtaining the technology it wants and probably will be lax in enforcing Memorandum of Understanding provisions. Moreover, Brazilian firms may reverse engineer key high-technology components and then seek export rights for "Brazilian" versions of such products—posing political problems for Washington and its COCOM allies over enforcement mechanisms.

25X1

Secret

Page Denied

Next 22 Page(s) In Document Denied